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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/784,627 | 02/23/2004 | David J. Benard | 01AB005A / ALBRP234USA | 8374 |

7590 03/24/2005

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| EXAMINER | |
|---|---|
| PATEL, NITIN | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2673 | |

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/784,627 | BENARD ET AL. | |
| | Examiner | Art Unit | |
| | Nitin Patel | 2673 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-23 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-49 of U.S. Patent No. 6,741,237 B1.

Benard shows a touch screen system, comprising: a substrate that has a surface', a plurality of acoustic wave transducers located near a perimeter of the substrate surface', and a control component that determines a location of a perturbation on the substrate surface (in claim 1).

Benard shows the plurality of acoustic wave transducers (more than one in claim 1) comprises at least one acoustic wave transducer that transmits a first acoustic wave that propagates along the substrate surface, and at least two acoustic wave transducers that receive acoustic waves that propagate along the substrate surface (in claim 1).

Benard shows the location of the perturbation on the substrate surface is determined based, at least in part, on time delays between transmission of the first acoustic wave from the first transducer and receipt of a corresponding acoustic wave at each of the second and third transducers that was reflected or scattered from the location of the substrate surface being perturbed (in claim 3).

Benard shows the time delays between transmission of the first acoustic wave and receipt of corresponding perturbation-reflected acoustic waves at the second and third transducers define respective ellipses (in claim 12).

Benard shows an intersection between the ellipses delineates a perturbation location on the surface of the substrate (in claim 5).

Benard shows the plurality of transducers comprises a transmitting transducer that converts an electrical signal into an acoustic wave that is propagated across the substrate surface (in claim 7).

Benard shows the plurality of transducers comprises at least two receiving transducers that convert an acoustic wave that is propagated across the substrate surface into an electoral signal that can be analyzed by the control component (In claim 20).

Benard shows comprising a comprising at least one grating associated with each of the at least two receiving transducers and disposed above the piezoelectric element of each receiving transducer (in claim 4).

Benard shows comprising an amplifier associated with each receiving transducer that amplifies the electrical signal produced by the receiving component for analysis by the control component (in claim 22).

Benard shows method for determining a location of a perturbation on a substrate surface, comprising: transmitting an acoustic wave across a substrate surface', detecting the transmitted acoustic wave at least two points near a perimeter of the substrate surface; detecting extant time delays between transmission of the acoustic wave and receipt of the acoustic wave at the at least two points; and determining a location of perturbation of the substrate surface based at least in part on detected time delays (in claim 38,39,45).

Benard shows transmitting the acoustic wave at a broad diffraction angle to propagate the wave across the entire substrate surface (In claim 39).

Benard shows comprising perturbing the substrate surface to deflect the transmitted acoustic wave (in claim 39).

Benard shows converting the detected acoustic waves into electrical signals (In claim (in claim 45).

Bernard shows comprising transmitting the electrical signals to a control component for analysis is amplifying the electrical analyzing the electrical signals to determine the time delay between transmission of the acoustic wave and receipt of the transmitted acoustic wave at each receiving transducer proximity to each of at least two receiving transducers to direct an incoming acoustic wave longitudinally to each respective receiving transducer (in claim 45-49).

Benard shows a perturbation location on a substrate surface, comprising, means for transmitting an acoustic wave across a substrate surface, means for receiving the transmitted acoustic wave at least two points near a perimeter of the substrate surface; and means for determining a location of a perturbation of the substrate surface based at least in part on time delays between transmission and receipt of the acoustic wave (in claim 39).

Benard shows further comprising means for longitudinally directing a transmitted acoustic wave to the means for receiving the transmitted acoustic Wave and converting an and mechanical stress signal to an electrical signal indicative of the mechanical stress signal (In claim 40-44).

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-23 is rejected under 35 U.S.C. 102(e) as being anticipated by Wood et al., (U.S. Patent No. 6,335,723).

As per claims 1,12,20 Wood shows a touch screen system (In fig.15), comprising: a substrate having a surface; at least three acoustic wave transducers located at spaced apart locations near a perimeter of the substrate surface (In fig.22); a first transducer of the at least three acoustic wave transducers being operative to transmit a first acoustic wave that propagates along the substrate surface; second and third transducers of the at least three acoustic wave transducers being operative to receive acoustic waves that propagate along the substrate surface(In fig.22); and a control system operative to determine a location of the substrate surface being perturbed based on time delays between transmission of the first acoustic wave from the first transducer and receipt of a corresponding acoustic wave at each of the second and third transducers that was reflected or scattered from the location of the substrate surface being perturbed(in col.5,6 and In Abstract).

As per claim 2, Wood shows The system of claim 1, the time delay between transmission of the first acoustic wave from the first transducer and receipt of the corresponding acoustic wave at the second transducer defining a first ellipse, and the time delay between transmission of the first acoustic wave from the first transducer and receipt of the corresponding acoustic wave at the third transducer defining a second ellipse, the intersection between the first and second ellipses corresponding to the location of the substrate surface being perturbed(In Fig.2)

As per claims 3,10,11,15,16 Wood shows the control system further comprising a lookup table programmed with time delay values, a portion of the time delay values defining coordinates along a plurality of the first ellipses, another portion of the time

delay values defining coordinates along a plurality of the second ellipses, the first transducer and the second transducer being foci of the first ellipse, and the first transducer and the third transducer being foci of the second ellipse (In col.8 lines 8-55).

As per claim 4, Wood shows the control system being operative to output coordinates of the intersection between the first and second ellipses that correspond to the location of the substrate surface being perturbed (In fig.2).

As per claim 5, Wood shows the first, second, and third transducers being located at different corners of the substrate (In Fig.22 element 18a-c).

As per claims 6,13 Wood shows the second and third transducers being located at substantially diagonally opposed corners of the substrate (In fig.4).

As per claims 7,8 Wood shows the first transducer being operative to emit the first acoustic wave with a diffraction angle of about ninety degrees, such that the first acoustic wave can propagate across substantially the entire substrate surface (in fig.2).

As per claims 9,18,19 Wood shows further comprising a generally rigid membrane overlying at least a substantial portion of the substrate surface, the membrane being elastically deformable relative to the substrate surface between a first condition in which the membrane is spaced from the substrate and a second condition in which the membrane contacts the substrate surface at the location of the substrate surface being perturbed (In fig.15).

Coordinates in response to the time delays associated with each transmission during a perturbation.

As per claim 14, Wood the control system determining a first coordinate associated with the location at which the substrate surface is perturbed based on the first and second time delays and a second coordinate associated with the location at which the substrate surface is perturbed based on the first and second time delays, the first and second coordinates defining the location at which the substrate surface is perturbed (In fig.2).

As per claim 17, Wood shows the first transducer and the second transducer being foci of the plurality of first ellipses, and the first transducer and the third transducer being foci of the plurality of second ellipses (In fig.22).

As per claims 21- 23 Wood shows at least two-second acoustic wave transducers being located near diagonally opposed corners of the substrate (In Fig.4).

***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 571-272-7677. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NP
March 21, 2005

VIJAY SHANKAR
PRIMARY EXAMINER